REMARKS

Initially, Applicants filed an Information Disclosure Statement (IDS) on December 29, 2003. The Examiner has not acknowledged receipt of this IDS. Applicants respectfully request that the Examiner consider the document cited in connection with the IDS by initialing and returning a copy of the Form 1449 that accompanied the IDS.

In the non-final Office Action, the Examiner objected to Fig. 1 of the drawings; objected claims 2-5 and 7-9 for minor informalities; rejected claims 1-10 under 35 U.S.C. § 112, second paragraph, as indefinite; and rejected claims 1 and 6 under 35 U.S.C. § 103(a) as unpatentable over Yasue et al. (U.S. Patent Application Publication No. 2002/0093949) in view of Lee (U.S. Patent No. 6,198,752). The Examiner indicated that claims 2-5 and 7-10 would be allowed if rewritten to overcome the rejection(s) under 35 U.S.C. § 112 and to include the features of the base claim and any intervening claims.

By this Amendment, Applicants amend the specification and drawings to improve form, amend claims 1-10 to improve form, and add new claims 11-15. Applicants appreciate the Examiner's identification of allowable subject matter, but respectfully traverse the Examiner's rejections under 35 U.S.C. §§ 112 and 103 with regard to the claims as amended herein. Claims 1-15 are pending.

In paragraphs 1 and 2 of the Office Action, the Examiner objected to Fig. 1 of the drawings because the labels "FROM" and "TO" at the ATM switch allegedly do not match the direction of the arrows. Applicants provide herewith a replacement sheet for Fig. 1. In the replacement sheet for Fig. 1, Applicants have changed the labels from "TO" to "FROM," and

vice versa. Accordingly, Applicants respectfully request the reconsideration and withdrawal of the objection to the drawings.

In paragraphs 3 and 4 of the Office Action, the Examiner rejected claims 2-5 and 7-9 for minor informalities. Applicants have amended claims 2-5 and 7-10 in the manner suggested by the Examiner. Accordingly, Applicants respectfully request the reconsideration and withdrawal of the objection to claims 2-5 and 7-9.

In paragraph 5 of the Office Action, the Examiner rejected claims 1-10 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. In particular, the Examiner alleged that the phrase "the frame length of the frame with a next frame" in claim 1 lacks antecedent basis (Office Action, page 3). Applicants have amended claim 1 to recite "compensating, when a frame of an abnormal length is detected, for the abnormal length of the frame with data from a next frame." Applicants submit that this feature is definite. Accordingly, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1-5 under 35 U.S.C. § 112.

The Examiner also alleged that the phrase "said reassembly means" in claim 6 lacks antecedent basis (Office Action, page 3). Applicants have removed reference to "said reassembly means" from claim 6. Accordingly, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 6-10 under 35 U.S.C. § 112.

In paragraph 8 of the Office Action, the Examiner rejected claims 1 and 6 under 35 U.S.C. § 103(a) as allegedly unpatentable over Yasue et al. in view of Lee. Applicants respectfully traverse the rejection.

Amended independent claim 1, for example, is directed to an STS frame-ATM cell circuit emulation apparatus for cellularizing an STS-(NxM) frame formed by multiplexing M STS-N

frames formed from different channels into ATM cells and multiplexing M different STS-N frames assembled from ATM cells into an STS-(NxM) frame. The STS frame-ATM cell circuit emulation apparatus comprises circuit termination means for inputting and outputting frame data from and to a circuit, buffer means for inputting and outputting an ATM cell sync signal and ATM cell data from and to an ATM switch, and reassembly means connected between the circuit termination means and the buffer means. The reassembly means is for detecting a frame of an abnormal length from the ATM cell sync signal and the ATM cell data from the buffer means, compensating, when a frame of an abnormal length is detected, for the abnormal length of the frame with data from a next frame, and outputting a resulting frame as a frame pulse signal and frame data to the circuit termination means.

Neither Yasue et al. nor Lee, whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in amended claim 1. For example, neither Yasue et al. nor Lee discloses or suggests reassembly means for detecting a frame of an abnormal length from the ATM cell sync signal and the ATM cell data from the buffer means, compensating, when a frame of an abnormal length is detected, for the abnormal length of the frame with data from a next frame, and outputting a resulting frame as a frame pulse signal and frame data to the circuit termination means.

The Examiner alleged that Yasue et al. discloses reassembly means as a cell deassembler 14 in Fig. 5 and cited paragraph 0117 of Yasue et al. for support (Office Action, pages 4-5). Applicants respectfully disagree.

Yasue et al. describes cell deassembler 14 in paragraphs 0100-0119 as receiving AAL1 cells and deassembling the received AAL1 cells to extract a SAR-PDU payload. Nowhere in this

section, or elsewhere, does Yasue et al. disclose or suggest that cell deassembler 14 detects a frame of an abnormal length from an ATM cell sync signal and an ATM cell data from buffer means, and when a frame of an abnormal length is detected, compensates for the abnormal length of the frame with data from a next frame, as required by claim 1.

At paragraph 0117, Yasue et al. discloses:

> SAR-PDU header terminator 142 terminates SAR-PDU header 113 of ATM cell payload 112, which is the remaining region of the AAL1 cell of which ATM cell header 111 has been terminated by ATM cell header terminator 141. The terminated AAL1 cells, i.e., SAR-PDU payload 114 (47 bytes), which is the result of the termination with respect to the AAL1 cells, are sequentially provided as output data for SOH generator 12 of PHY unit 32 (42). However, if an AAL1 cell of which SAR-PDU header 113 that has been terminated is provided with an even SN (0, 2, 4, 6) and is set an SDT pointer value of 1 byte in pointer field 115, SAR-PDU header terminator 142 outputs the set SDT pointer value (pointer data of 7 bits) as a load value of counter 143 and therefore the remaining 46 bytes of SAR-PDU payload 114 becomes the output data.

In this section, Yasue et al. discloses that if an SDT pointer value is set in pointer field 115, the SDT pointer value is used as a load value for counter 143 to assist in outputting the remaining bytes of the SAR-PDU payload (see also, paragraph 0119). Nowhere in this section, or elsewhere, does Yasue et al. disclose detecting a frame of an abnormal length from an ATM cell sync signal and an ATM cell data from buffer means, and when a frame of an abnormal length is detected, compensating for the abnormal length of the frame with data from a next frame, as required by claim 1.

The Examiner alleged that the SDT pointer disclosed by Yasue et al. is used to compensate for longer STS frames by locating a frame boundary 116 in the next AAL1 cell or frame and cited Fig. 17 (paragraphs 0019-0021) of Yasue et al. for support (Office Action, pages 4-5). Applicants respectfully disagree.

At paragraphs 0019-0021, Yasue et al. discloses in relation to Fig. 17:

Among eight sequence cells for a single cycle, each cell having a SN of one of 0 through 7, an arbitrary cell having an even SN (i.e., SN=0, 2, 4, or 6) can contain a pointer field 115 at the first byte in SAR-PDU payload 114. If SAR-PDU payload 114 has a boundary (here, data having a boundary is called "structured data"), pointer field 115 indicates the boundary of data in SAR-PDU payload 114. Writing of an offset value (an SDT (Structured Data Transfer) pointer value) into pointer field 115 indicates a single particular byte in SAR-PDU payload 114 which includes the pointer field 115 or in SAR-PDU payload 114 of the succeeding cell.

When SAR-PDU payload 114 of SN=3 has boundary 116 as shown in FIG. 17, the position of boundary 116 is indicated by writing the number of data bytes that present between a pointer field 115 of a cell of SN=2 and the boundary in cell of SN=3, as the offset value, into the pointer field 115 of the cell of SN=2.

Generally, the lower 7 bits of the pointer field 115 (1 byte) is used as an SDT pointer value, and the most significant bit (MSB) remaining is used as a check bit for an error, such as for parity check.

In this section, Yasue et al. discloses that the SDT pointer value may be used to identify a boundary in a next cell. Contrary to the Examiner's allegation, the use of a pointer to identify a boundary in a next cell is not equivalent to compensating for the abnormal length of a frame with data from a next frame when a frame of an abnormal length is detected, as required by claim 1.

The disclosure of Lee provides nothing to cure these deficiencies in the disclosure of Yasue et al.

For at least these reasons, Applicants submit that claim 1 is patentable over Yasue et al. and Lee, whether taken alone or in any reasonable combination.

Amended independent claim 6 recites features similar to features recited in claim 1. Claim 6 is, therefore, patentable over Yasue et al. and Lee, whether taken alone or in any reasonable combination, for reasons similar to reasons given with regard to claim 1.

For at least these reasons, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1 and 6 under 35 U.S.C. § 103 based on Yasue et al. and Lee.

New claims 11-13 and 14 ultimately depend from claims 1 and 6, respectively. Claims 11-14 are, therefore, patentable over Yasue et al. and Lee for at least the reasons given with regard to claims 1 and 6. New independent claim 15 recites features similar to features recited in claims 1 and 6. Therefore, claim 15 is patentable over Yasue et al. and Lee, whether taken alone or in any reasonable combination, for reasons similar to reasons given with regard to claims 1 and 6.

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of pending claims 1-15.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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ATTACHMENT: REPLACEMENT SHEET FOR FIG. 1

Amendments to the Drawings:

The attached sheet of drawings includes a change to Fig. 1. This sheet replaces the original sheet including Fig. 1.

Attachment: Replacement Sheet